

	<b>COUNTY OF SACRAMENTO</b> EMERGENCY MEDICAL SERVICES AGENCY	<b>Document #</b>	<b>8032.03</b>
	<u>PROGRAM DOCUMENT:</u> <b>Traumatic Cardiac Arrest</b>	<b>Initial Date:</b>	<b>06/22/21</b>
		<b>Last Approval Date:</b>	<b>09/14/23</b>
		<b>Effective Date:</b>	<b>11/01/26</b>
		<b>Next Review Date:</b>	<b>03/01/26</b>

\_\_\_\_\_  
 Signature on File  
 EMS Medical Director

\_\_\_\_\_  
 Signature on File  
 EMS Administrator

**Purpose:**

- A. To serve as the treatment standard for treating traumatic cardiac arrest patients.

**Authority:**

- A. California Health and Safety Code, Division 2.5
- B. California Code of Regulations, Title 22, Division 9

**Protocol:**

- A. The pathophysiology of traumatic cardiac arrest differs from medical cardiac arrest and is primarily due to one or a combination of factors: hypovolemia, obstruction of blood flow, and hypoxia.
- B. The initial cardiac rhythm for most patients in survivable traumatic cardiac arrest is pulseless electrical activity (PEA). Traumatic cardiac arrest PEA is most often a very low output state due to hypovolemia.
- C. Traumatic cardiac arrest patients undergoing resuscitation shall be transported as quickly as possible to the hospital.
- D. Patients with trauma in cardiac arrest who, by prehospital presentation, may have suffered a medical event before trauma shall undergo medical cardiac arrest resuscitation per Policy# 8031 - Cardiac Arrest, with attention and appropriate management to emergent trauma needs (hemorrhage control, pneumothorax decompression as indicated, and orthopedic immobilization as indicated)
- E. There is no evidence-based medical support for the use of medications in traumatic cardiac arrest. In traumatic arrest, Epinephrine and Amiodarone are **NOT** indicated in traumatic cardiac arrest. If there is any doubt as to the cause of the arrest, treat it as a non-traumatic arrest.

**Policy:**

<b>BLS</b>
<ol style="list-style-type: none"> <li>1. Treat immediate threats to life</li> <li>2. External hemorrhage control per PD# 8065 - Hemorrhage Control. Apply tourniquets as necessary.</li> <li>3. Airway and Breathing: Clear airway when indicated; place OPA and BVM ventilation.</li> <li>4. Chest compressions/high-quality CPR for any rhythm other than Wide Complex PEA &lt; 40 bpm or Asystole.</li> <li>5. The use of a Mechanical CPR Device should be omitted if it will cause a delay in transport.</li> <li>6. Expedite transport to the closest Trauma Center.</li> </ol>

## ALS

1. Continue transport with BLS airway if adequate ventilation/chest rise is achieved. Advanced airway as needed per policy.
2. Correct potential obstructive shock – maintain a high index of suspicion for tension pneumothorax. Bilateral needle thoracostomy per PD# 8015 – Trauma.
3. Obtain large-bore IV or IO access. Give 1 liter of Normal Saline bolus by pressure bag infusion.
4. Cardiac monitoring – defibrillate shockable rhythms.

### Post Resuscitation Considerations:

- A. Any traumatic cardiac arrest patient who has a Return of Spontaneous Circulation (ROSC) during any part of the resuscitation and who is transported shall be transported to a Trauma Center.
- B. Intravenous (IV) or Intraosseous (IO) fluids should be placed wide open with pressure bags.
- C. If a palpable pulse becomes present:
  1. Re-assess for and control external hemorrhage.
  2. Administer TXA as indicated per PD# 8065 – Hemorrhage Control.
  3. Titrate normal saline to SBP  $\geq$  ~~90~~ 70 mmHg or palpable peripheral pulses.
  4. Consider pre-hospital blood if available.
  5. External warming.

**NOTE:** Epinephrine shall not be given in the setting of traumatic arrest.

### Cross Reference:

PD# 2033 – Determination of Death  
PD# 2085 – Do Not Resuscitate  
PD# 8015 – Trauma  
PD# 8020 – Respiratory Distress - Airway Management  
PD# 8024 – Cardiac Dysrhythmias  
PD# 8026 – Respiratory Distress  
PD# 8031 – Non-Traumatic Cardiac Arrest  
PD# 8044 – Spinal Motion Restrictions  
PD# 8065 – Hemorrhage Control

